REMARKS

Claims 1, 2 and 5-17 are pending in the instant application. Claims 1, 2 and 5-17 have been rejected. Claims 1, 9, 11 and 17 have been amended. Claims 3, 4 and 18-30 have been canceled. No new matter has been added by this amendment. Reconsideration is respectfully requested in light of the following remarks.

I. Election/Restriction Requirement Under 35 U.S.C. §121

The restriction requirement placing the claims into Groups I-XVI has been deemed proper and made final. Claims 3, 4 and 18-30 are withdrawn from further consideration. Accordingly, Applicants are canceling claims 3, 4 and 18-30 without prejudice, reserving the right to file continuing applications for the canceled subject matter.

II. Priority Under 35 U.S.C. §119(e)

Priority to U.S. provisional patent application Serial No. 60/090,849 has not been granted for claims 6, 7, 9, 10, 16 and 17 as the Examiner suggests that the provisional application does not provide support for enhancing or suppressing at least the humoral immune response or CD4 Th1 immune response to a target antigen in an aged or immuno-compromised individual (claim 6); enhancing or suppressing at least the humoral immune response or CD4 Th1 immune response to a target antigen in a human subject fifty years or older (claim 7); the use of a toxin as an antigen (claim 9); treating a cancer or tumor cell of the head and neck (claim 10); treating a protozoan disease (claim 16); treating leishmanin????, Listerine?????, leprosy, or tuberculosis

infection (claim 17) as recited in the claims. The Examiner suggests that the filing date of said claims is the filing date of the priority application PCT/US99/12825. Applicants respectfully request reconsideration.

Applicants respectfully disagree with the Examiner in the determination of priority with respect to claims 9, 10 and 16. As in the present application, application Serial No. 60/090,849 clearly indicates that an antigen can be a toxin such as tetanus or diphtheria toxin See page 9, line 15 of the '849 application. The '849 application further teaches that an antigen can be from a protozoan such as a malarial antigen, *e.g.*, CS protein and sporozoite surface protein 2, for treating diseases of the same. See page 9, lines 18-19 of the '849 application.

MPEP 2163.06 states that the claims as filed in the original specification are part of the disclosure and therefore, if an application as originally filed contains a claim disclosing material not disclosed in the remainder of the specification, the applicant may amend the specification to include the claimed subject matter. Claim 4 of the '849 application is drawn to a method for enhancing or suppressing at least the humoral immune response to a target antigen wherein the antigen is expressed by a prostate, breast, ovarian, *lung, head and neck, uterine*, or leukemia cell. Therefore, the '849 application teaches lung, head and neck, and uterine cancer or tumor cell antigens, toxin antigens, and protozoan diseases and, therefore, the present application should receive the benefit of the filing date of the '849 application under 35 U.S.C. §119(e). Applicants respectfully request priority to U.S. Patent Application Ser. No. 60/090,849, filed 26 June 1998 for claims 9, 10 and 16.

III. Information Disclosure Statement

The Examiner has indicated that Applicants have not filed an Information Disclosure Statement with the instant application. Accordingly, an Information Disclosure Statement for this application was filed 3 March 2004.

IV. Objection to the Specification

The Examiner has suggested that the application be corrected for all spelling and trademarks errors. Accordingly, Applicants have reviewed and corrected spelling errors and made correct recognition of trademarks throughout the application.

V. Rejection of Claims Under 35 U.S.C. §112

Claim 17 has been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner suggests that claim 17 is indefinite in the recitation of "leishmanin?????" and "Listerine????".

Leishmanin antigen and the misspelling of listeriosis (*i.e.*, Listerine) were inadvertently used in the listing of bacterial infections which can be treated using the method of claim 1. Thus, in accordance with the antigens listed at page 10, lines 14 and 24-25; page 11, line 4; and the leishmanin antigen disclosed in claim 17 as filed, claim 17 has been amended to correctly list the intended bacterial infections of leishmaniasis, listeriosis, Lyme's disease, leprosy, and tuberculosis infections which can be treated using the method of claim 1. Withdrawal of this rejection is respectfully requested.

VI. Rejection of Claims Under 35 U.S.C. §103

Claims 1, 2, and 5-17 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Anand et al. (U.S. Patent No. 6,291,208) and Heath (U.S. Patent Application No. 2002/0135722) and further view of Applicants' admission that species of classes and types of antigens are held obvious in view of one another in the instant invention.

The Examiner suggests that Anand et al. teach the use of antibody conjugates comprising antibodies that bind antigen presenting cells, including dentritic cells, to deliver antigens in order to generate immunogenic compositions to a variety of antigens and that this is applicable to any antigen derived from viruses, bacteria and tumors.

It is further suggested that Heath teaches the co-administration of a CD40 stimulating moiety (*e.g.*, anti-CD40 antibodies) and the appropriate antigen, including the use of covalent linkage or co-entrapment as a vaccine to a variety of antigens.

The Examiner further suggests that Applicants' election filed 11/3/03 indicates that the specific class and type of antigen are obvious variants over one another and the species of classes and types of antigens are held obvious in view of one another in the instant application.

Thus, the Examiner suggests that given the teachings of Heath to provide anti-CD40 with antigen in composition form or as a conjugate and the teachings of Anand et al. to provide antigen with anti-antigen present cell/dendritic cell antibodies, it would have been obvious to one of ordinary skill in the art to administer the antigen in the context of such antigen-antibody

conjugate with the immunostimulatory anti-CD40 antibodies to boost the immune response to a wide variety of desired antigens, including providing both components in the same composition, as taught by Heath. It is suggested that the motivation to combine the prior art can arise from the expectation that the prior art elements will perform their expected function to achieve their expected results when combined for the common known purpose.

Applicants respectfully traverse this rejection.

While Anand et al. teach the use of antibody conjugates comprising antibodies that bind antigen presenting cells, including dentritic cells, to deliver antigens in order to generate immunogenic compositions to a variety of antigens and Heath teaches the co-administration of a CD40 stimulating moiety (*e.g.*, an anti-CD40 antibody) as an adjuvant in combination with an antigen, these references do not teach or suggest all three components of the composition used in accordance with the method of the invention, *i.e.*, (i) an antigen attached to (ii) an antibody that specifically binds to a molecule which is expressed by an antigen-presenting cell and (iii) an anti-CD40 antibody. The Examiner cites paragraphs 0026-0027 and 0029 of Heath as evidence that it would have been obvious to combine the prior art references in the same composition because these passages describe the co-administration of the CD40 stimulating moiety (*e.g.*, an anti-CD40 antibody) with the appropriate T-cell independent and/or dependent antigen, or preferably through covalent linkage, or co-entrapment on/in a carrier system. However, this reference does not teach or suggest that the "co-entrapment on/in a carrier system" is an antibody that specifically binds to a molecule which is expressed by an

antigen-presenting cell. This reference further suggests that the antigen and/or adjuvant is in the form of an immunostimulating complex, or liposomes or biodegradable microspheres, *to increase the association between antigen and CD40 binding moiety*, however, nowhere is it taught or suggested that an antibody is attached to the antigen to *target* the antigen to an antigen-presenting cell. Anand et al. teach targeting an antigen to an antigen-presenting cell using a antibody; however this reference does not teach or suggest the use of an anti-CD40 antibody. In fact, Anand et al. teach that the use of adjuvants can be avoided by using an antigen-antibody conjugate as disclosed therein. Thus, the skilled artisan would not be motivated to use the anti-CD40 adjuvant disclosed by Heath as Anand et al. teach that advujants are not necessary.

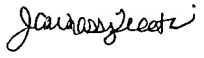
Moreover, one of ordinary skill in the art would not have had a reasonable expectation of producing a *synergistic* enhancement or suppression of at least the humoral immune response or CD4 Th1 immune response to a target antigen by combining the teachings of the cited references. The combination of an antigen-antibody conjugate and an anti-CD40 antibody in accordance with the method of the present invention act together to have an effect which is greater than the simple sum of their effects when acting alone. This synergism would not be expected or obvious from the combined teachings of Anand et al. and Heath. Accordingly, claim 1 has been amended to recite that the combination of agents disclosed by the present invention *synergistically* enhances or suppresses at least the humoral immune response or CD4 Th1 immune response to a target antigen. Support for this amendment can be found at page 7, lines 8-10.

Thus, when combined, these references fail to establish a *prima facie* case of obviousness as required by MPEP 2143 and therefore withdrawal of this rejection is respectfully requested.

VII. Conclusion

The Applicants believe that the foregoing comprises a full and complete response to the Advisory Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,



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